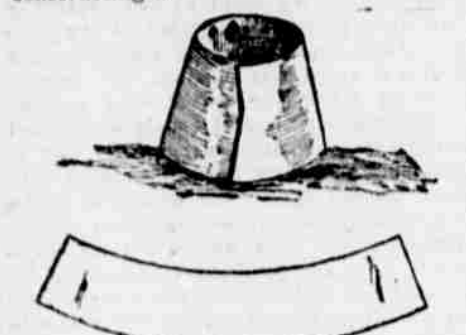


FARM AND GARDEN.

DESIRABLE VARIETIES OF CELERY FOR MANY SECTIONS.

Among the most important points about fruits and trees—a simple and inexpensive plant protector—the use of insecticides.

In many sections of the country it is not possible to grow cucumbers and other plants without the protection of frames or bottomless boxes of some kind, that protect the young plant from their insect enemies. These contrivances are often expensive and troublesome to adjust. The illustration represents a device vouchsafed by The American Agriculturist as an effective plant protector, easy to make and apply, and costing only the labor of constructing it.



PLANT PROTECTOR.

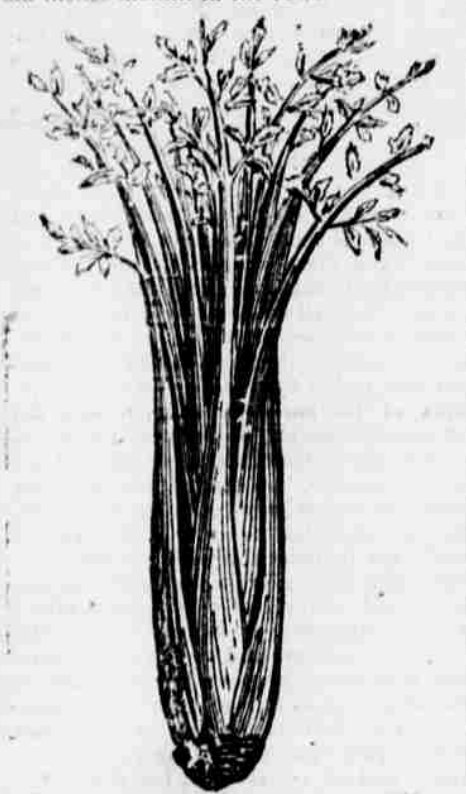
This inexpensive protector consists simply of a piece of card board or stiff paper of any kind, cut as seen in Fig. 2 in the illustration. When the ends are brought together and the slits, indicated in the illustration, made to interlock a cone, as seen in Fig. 1, is produced, which, when placed around the plant, furnishes as complete a protection against insects as the most expensive device.

Newly Set Trees.

Newly set trees require special care at this season, and many trees will doubtless die of neglect, that with proper attention might thrive. Hot, dry weather kills many young trees. The ground around newly set trees ought to be frequently stirred and not allowed to become hard. It is better to mulch at time of planting, stir the soil and apply as a mulch some substance that will soak up and retain moisture. It does no good to water trees that are not mulched in dry weather. A mulch serves a double purpose; it retains moisture in the ground and holds moisture in itself to be given up as the soil beneath it dries.

Transplanting Celery.

Select if possible the first day after a heavy rain for transplanting celery, when the ground is cool and moist. Set the plants about the same level, with the ground around them, as they grew before transplanting. Remember, if set too high the plants will wilt; if set too low they will be smothered. Press the earth firmly around the plants at time of transplanting. Celery plants may be set between rows of early vegetables, such as onions, cabbage, and the like, when ground is limited. A usual plan is to set the plants in rows about three feet apart, the plants being six inches distant in the rows.



WHITE SOLID CELERY.

Numbered with leading varieties popular in many sections, and notably in the great celery districts about Kalamazoo, Mich., is "Golden Dwarf." In size and habit of growth it is much the same as the half dwarf and dwarf kinds, except that when blanched the heart is of a waxy golden yellow. It is, during winter, one of the best keepers known.

"Boston Market" is a favorite around Boston, and is similar to the dwarf white varieties, but rather more robust. "Giant White Solid" is one of the best of the large growing sorts, and is prized in southern sections especially, because it will thrive in a dry, hot atmosphere. "White Plume," a comparatively new celery, has found favor among amateur



HENDERSON'S WHITE PLUME.

growers because its stalks and leaves are naturally white, and do not require blanching by the old processes of high banking. By simply tying up the stalks and drawing up the soil with a hoe the work of blanching is complete.

How to Apply Insect Poison.

The bureau of entomology, department of agriculture at Washington, D. C., sends out the following for use as insecticides on or about plants, trees, etc.: London Purple.—To twenty pounds

four from one-quarter to one-half pound is added and well mixed. This is applied with a sifter or blower. With forty gallons of water one-quarter to one-half pound is mixed for spraying.

Paris Green.—With twenty pounds of flour from three-quarters to one pound is mixed and applied by sifting or by a blower. The same amount of the insecticide to forty gallons of water is used as a spray.

Bisulphite of Carbon.—For use in the ground a quantity is poured or injected among the roots that are being infected. Against insects damaging stored grain of museum material a small quantity is used in air tight vessel.

Carbolic Acid.—A solution of one part in 100 of water is used against parasites and domestic animals and their barns and sheds; also on surface of plants and among the roots in the ground.

Heliole.—The powder is sifted on alone or mixed one part to twenty of flour. With one gallon of water one-quarter pound is mixed for spraying.

Kerosene Milk Emulsion.—To one part milk add two parts kerosene, and churn by force pump or other agitator. The butter like emulsion is diluted ad libitum with water. An easier method is to simply mix one part of kerosene with eight of milk.

Soap Emulsion.—In one gallon hot water one-half pound whale oil soap is dissolved. This, instead of milk, is mixed to an emulsion with kerosene in the same manner and proportion as above.

Pyrethrum (Persian Insect powder).—Is blown or sifted on dry; also applied in water, one gallon to a tablespoonful of the powder, well stirred and then sprayed.

Tobacco Decoction.—This is made as strong as possible as a wash or spray to kill insect pests on animals and plants.

Thinning Fruits.

All horticulturists who grow choice fruit for market realize the importance of thinning out the embryo fruit by relieving trees and vines of any surplus and of all inferior or diseased specimens. Farmers, as a rule, also recognize the importance of thinning fruits, but comparatively few of them do it, the plea being that it is too much trouble. The consequence of neglect in this direction is a lot of inferior fruit, often unfit for any market; very unlike the choice grades that command highest prices.

The surplus of trees or vines may be removed before the flowers have bloomed by the operation of disbudding, or it may be done as soon as the fruit has set; indeed, thinning may still be accomplished after the fruit is half grown, by reducing the number, so that what remains will be fully and perfectly developed. This thinning out of fruit pays alike on pear, peach, plum and other fruit trees, and especially have its good effects been noted on grape vines. It is by the removal of a large portion of clusters of embryo fruits that prize grapes, peaches and the like are obtained.

Timely Notes on Bee Keeping.

Work to be done in the apiary during the summer months runs somewhat as follows:

Arrange hives for boxing and extracting.

Have everything in readiness for swarms, if this system is practical.

Rear queens, and make artificial swarms.

Ventilate strong swarms in the warmest weather.

Remove surplus boxes as soon as full, and supply the place of the first ones with empty boxes.

Look out for the moth larvae in surplus honey and extra combs.

Extract at suitable intervals.

If preparations are to be made for wintering bees indoors the work ought to be done in warm weather, that all damp material may be dried before the room is occupied by the bees. Do not neglect refuse comb designed for wax.

Save the Liquid Manure.

Scientists have proven by chemical analysis that the value of liquid manure as plant food, and it will pay farmers to save all that is made in stables, barns and cattle sheds. This can be done by conducting it into tanks or cisterns made for the purpose, or by the use of absorbents. The latter is the more usual plan, and not a few farmers consider the bedding from sheds and stables of horses, sawdust and other material saturated with urine, one of the most valuable components of the manure pits and compost heap. Liquid manure must be largely diluted before application; hence the plan alluded to of doing it by absorbents and mixing therein with the manure heap, is an excellent one.

The Cabbage Worm.

The cabbage worm is the larva of the white butterfly, and should be hand picked before the first brood has passed the perfect stage. Pyrethrum, mixed with five times its weight of plaster, dusted into the center of the leaves with bellows, is effective. Paris green is also effective, but, being a poison, it is unsafe to use it after the leaves are more than four inches long.

Different Foods as Milk Producers.

The Iowa Agricultural college has made the following classification of the relative values of different foods as milk producers. Starting with 100 pounds of potatoes as a standard, 10 parts of milk corn is reckoned 50, timothy 50, barley 55, oats 60, wheat 65, wheat bran 70, clover hay 80, oil meal 145.

The Secret of Raising Sheep.

One great secret in rearing profitable sheep is that there shall be no pause in the growth of the lambs from the time they are dropped. Many failures arise because the lambs' growth is interrupted. Keep the lambs growing in the first and great principle in the economic management of sheepfolds.

Agricultural Notes.

The prospect for the apple crop is discouraging in almost every section except in New England and New York. The present is the "off" or non-bearing year, though many young orchards are fruitful in the "off" year.

A decrease in cotton average is noted in North Carolina, and is attributed to the beginning of an effort on the part of planters to grow their home supplies.

Reports from different states make it appear that there will be a fair crop yield.

From Germany comes the report that a decided preference is given in that country to American hickory for forest culture.

Truck farming in Louisiana is becoming one of the important industries of that state.

Virginia is raising a less quantity of tobacco, but it is of improved quality.

Favorable reports of the cotton crop come from several states.

Crop reports from Manitoba are encouraging.

SCIENCE AND PROGRESS.

A REMARKABLE ILLUSION ILLUSTRATED AND EXPLAINED.

Something About the Time and Manner of the Wearing Out of Iron Rails—How One of the Most Peculiar and Expensive Perferences is Obtained.

The personal appearance of the civet is not prepossessing, as will be seen from the illustration, but this animal yields a precious substance, one of the most peculiar and expensive perfumes in existence. This perfume is not only in great favor with Oriental women, but about 500 pounds of civet is used annually in the United States in the manufacture of perfumes. Like musk, it possesses lasting qualities, and when added in a minute quantity will augment the odor of other perfumes. Civet is a concrete mass, semi-fluid, with the consistency of honey. When taken from the animal it is of a yellow brown color, but by exposure turns to a dark brown.



THE CIVET.

This odoriferous cat is secreted in a cavity or pouch. It is extracted from the animal once a week, while it is firmly attached to a cage by means of strong chains. A small spoon is introduced into the pouch and the precious perfume is withdrawn with care. Hundreds of these animals are kept in captivity on the outskirts of Abyssinia and supply the world with civet.

There are, says Science News, from which the above was taken, two distinct varieties of the wonderful beast. The Viverra civetta, or true civet, is peculiar to Abyssinia and the southern division of Africa, where it is vulgarly known by the name of musk-cat. It may be distinguished by its projecting teeth, small and piercing eyes and short, rounded ears. The hair is long and thin, the color varying from a grayish black to light gray, darker on the back, where it forms an erectile mane. Its flattened sides are marked with black, irregular stripes. It is a bloodthirsty animal, and is an object of fear and abhorrence in this region, although it rarely moves abroad during the day, but passes the hours of light and heat in slumber, hidden from prying eyes. The Viverra zibetha of India and the Philippine islands differs in no essential particulars save its short and thick hair and a much longer neck; the description of one may serve for that, with this single variation. In many ways the civet resembles both the jaguar and the cat, the latter especially in disposition and size.

Delicate Photography.

German photographers have succeeded in photographing a projectile in the course of its flight, and some of the photographs show the head of condensed air which precedes every shot. It is this "head," explains Popular Science News, which prevents even skillful riflemen from hitting an empty egg shell when firing on a long thread. The air blows the shell out of the way of the bullet.

Liquid at Low Temperature.

Quicksilver is the metal mercury in a melted state. It thaws at 38.8 degs. below zero, or, below that point, freezes. Under and above a temperature of 39 degs. below zero there is the same relation between hard and melted mercury as there is between ice and water under and above a temperature of 32 degs. above, or potassium at 55 degs., or tin at 228 degs.

To Harden Tools.

A. E. Tucker claims, in a trade journal, that he has successfully edged grooving tools for chilled rolls by dipping the actual cutting portion in mercury. No more of the steel than is actually necessary should be dipped, as, while imparting extreme hardness, it naturally makes the body of the tool extremely brittle.

The Land Never Rests.

Recent scientific experiments make it appear, says a writer on earthquakes, that the surface of the land is never absolutely at rest for more than thirty hours at a time. Thus those great earthquakes which make epochs in history are merely extreme manifestations of forces that rarely sleep.

When Rails Wear Out.

It is a well known fact among railroad men that on railroads running north and south the west rails wear out the faster; that five rails will wear out on the west side of the track while three are doing service on the east side.

Why Teeth Vary in Hardness.

The teeth of an individual often vary greatly in hardness at intervals, and a Berlin physiologist, W. D. Miller, is experimenting to show that this is due to a varying proportion of lime salts in the food.

An Optical Illusion.

In a lecture before the Franklin Institute, Mr. Charles F. Hines exhibited a diagram which presents a remarkable illusion.

If one looks at the rectangular solid represented in perspective in the cut, the face ABCD will usually appear nearest to him and X farthest away; but by looking a little more closely a slight effort of the will causes this appearance to be reversed, and ABCD seems to be the back face, while X comes to the front, the apparent position of the solid changing at the same time. A little practice will enable one to cause it to change sides at will, and a peculiar sensation is experienced as the figure apparently changes its position, as if endowed with life.

AN ILLUSION.

It is rather difficult, says Science News, to briefly explain this illusion, which depends upon the laws of perspective. When the face ABCD appears to be in front, the back face appears to be resting in a natural position, and consequently the eye at first sees it that way; but when the sides are reversed the block seems to be tipped backward against the action of gravity, and an effort of the will is needed to make it assume that position, although the lines of perspective indicate both positions equally well. In order to prevent this confusion in drawings of crystals, etc., the back lines are usually drawn dotted or broken, to indicate their position.

Popular Summer Dresses.

Fondules and India silks are among the most popular and at the same time comfortable dresses for summer wear. The red fondules and China silks, so popular with French women, are also worn here. Velvet is much used as a trimming for these soft silk dresses, the velvet being employed for collar, cuffs, vest and plastron.

Announcement Extraordinary.

After many years of hard work, old SANTA CLAUS feels compelled to add to his former business of supplying CHRISTMAS GIFTS to make the little ones happy. He finds that their chimneys clean as they did in older times, and what with the Soot, Dirt and Smoke he constantly meets in his frequent excursions up and down the chimneys, he has become as dirty and grimy as a chimney sweep. This affects his health as well as his looks. He has therefore embarked in the SOAP business. From long years of observation in millions of homes, he knows that few of the Soaps in use are satisfactory, so he has invented a NEW SOAP which beats anything yet seen. He brands it with his own name, viz: **SANTA CLAUS** and has it made especially for him by Messrs. N. K. FAIRBANK & CO. the Great SOAP-MAKERS of the West. Hereafter he will present a cleaner appearance, and instead of making his visits but once a year, he will come every WASH DAY, and leave something as pleasing to grown folks as his Christmas gifts are to the Children. SANTA CLAUS stipulates that everything must be cleaned and washed with HIS soap. N. K. FAIRBANK & CO. MANUFACTURERS, CHICAGO.



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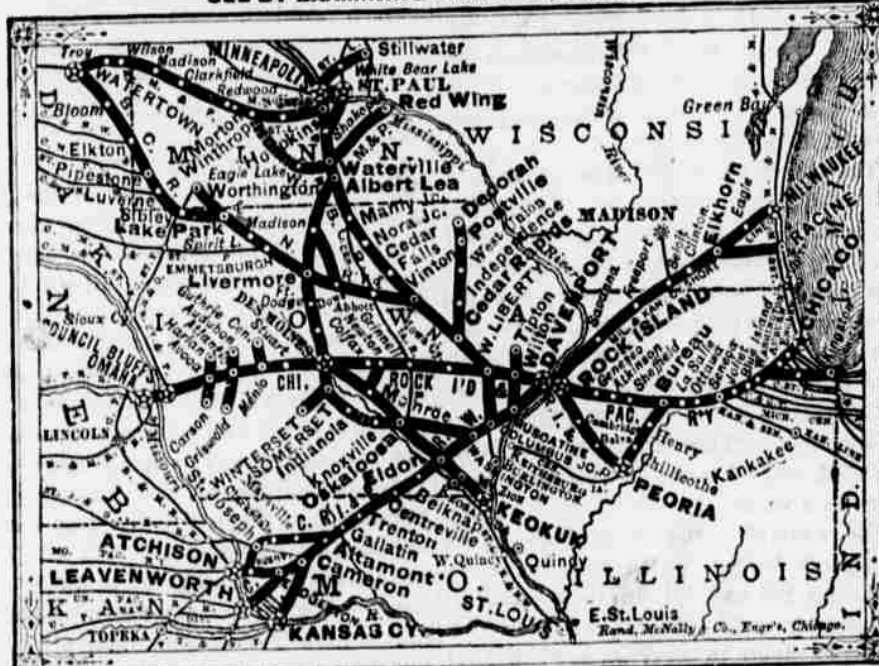
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